CLAIMS

What is claimed is:

1   An automated network communication device audit tool method comprising the steps of:

gathering communication device information;

parsing said gathered communication device information;

determining if additional communication device information is required;

analyzing the characteristic and operations of said network communications device; and

reporting said communication device information in a convenient format including identification of problems.

2   The automated network communication device audit tool method of Claim 1 comprising the step of retrieving information about said communication device and the status of said communication device.

3   The automated network communication device audit tool method of Claim 1 comprising the step of performing a network communication device query process that automatically queries said communication device.

4   The automated network communication device audit tool method of Claim 3 wherein said query process automatically queries an optical concentrator.

5   The automated network communication device audit tool method of Claim 1 comprises the step of automatically constructing the queries by issuing protocol commands formatted in the appropriate syntax for said communication device.

6   The automated network communication device audit tool method of Claim 1 wherein an automated intelligent expert network communication device audit analysis process is utilized to analyze the performance of said communication device in a communication network.

7   The automated network communication device audit tool method of Claim 1 comprising the step of automatically performing a parsing process that identifies portions of said communication device information and correlates said portions of said communication device information to a characteristic of said communication device.

8   The automated network communication device audit tool method of Claim 1 wherein said characteristic of said communications device is a configuration, performance or functionality characteristic.

9   The automated network communication device audit tool method of

Claim 1 wherein an analysis process utilizes an intelligent backend to analyze

parsed information.

10   The automated network communication device audit tool method of

Claim 9 wherein parsed communication device information is compared to

values included in an expert network audit database of said intelligent

backend.

11   The automated network communication device audit tool method of

Claim 9 wherein values included in said intelligent backend include

thresholds parameters that indicate acceptable configuration, performance

and functionality.

12   An automated network communication device audit tool comprising:

a bus for communicating information;

a central processor for processing information and instructions

including instructions associated with an automated network

communication device audit method, said central processor is coupled to said

bus;

a memory for storing said information and instructions for said central

processor, said memory coupled to said bus; and

a display device for displaying network communication device audit information to a user, said display device coupled to said bus.

13   An automated network communication device audit tool of Claim 12 wherein said network communication device audit information includes device configuration information, performance level information, and identification of parameters that do not meet threshold levels.

14   An automated network communication device audit tool of Claim 12 wherein said network communication device audit information includes a network communication device audit report that has the same user friendly look and feel for a variety of devices across different architectures and is organized in a manner that facilitates network management and maintenance.

15   An automated network communication device audit tool of Claim 14 wherein said network communication device audit report presents information associated with different areas of network management impact.

16   An automated network communication device audit tool of Claim 15 wherein said areas of network management impact areas includes fault management, performance management, capacity management, and configuration management.

17   An automated network communication device audit tool comprising:

a bus for communicating information;

a central processor for processing information and instructions including instructions associated with an automated network communication device audit method to analyze the health of a network communication device, said central processor is coupled to said bus;

a memory for storing said information and instructions for said central processor, said memory coupled to said bus; and

a display device for displaying network communication device audit information including information associated with said health of said network communication device, said display device coupled to said bus.

18   An automated network communication device audit tool of Claim 17 wherein a communication device audit methodology implemented by an intelligent backend determines the characteristics of a communication device, compares the results to a set of established net rules, and identifies net rule exceptions.

19   An automated network communication device audit tool of Claim 18 wherein said established net rules comprise definitions of predefined thresholds for acceptable tolerances associated with different characteristics of

said communication device including different acceptable tolerances for components of an optical concentrator.

20   An automated network communication device audit tool of Claim 18 wherein said communication device audit methodology includes the assignment of net rule exception points (NREPS) to identified net rule exceptions.

21   An automated network communication device audit tool of Claim 20 wherein said net rule exception points are used to identify problems and potential problems.

22   An automated network communication device audit tool of Claim 21 wherein said problems and potential problems are indicated within a network communication device audit table in a different manner than acceptable audit results.

23   An automated network communication device audit tool of Claim 22 wherein warning threshold exceptions are presented in a special font and in a contrasting color and critical threshold exceptions are displayed in a distinguishing font and different color.

24 An automated network communication device audit tool of Claim 17 wherein an intelligent backend identifies potential causes of a problem.

25 An automated network communication device audit tool of Claim 17 wherein an intelligent backend provides a suggested corrective course of action for a problem.

26 An automated network communication device audit tool comprising:

a means for gathering communication device information;

a means for parsing said gathered communication device information;

a means for determining if additional communication device information is required;

a means for analyzing the characteristic and operations of said network communications device; and

a means for reporting said communication device information in a convenient format including identification of problems.

27 The automated network communication device audit tool of Claim 26 comprising a means for performing a network communication device query process that automatically queries said communication device, wherein said queries are directed to retrieving information about said communication device and the status of said communication device.

28   The automated network communication device audit tool of Claim 27 wherein said query process automatically queries an optical concentrator.

29   The automated network communication device audit tool of Claim 27 comprises a means for automatically constructing the queries by issuing protocol commands formatted in the appropriate syntax for said communication device.

30   The automated network communication device audit tool of Claim 26 wherein a means for performing an automated intelligent expert network communication device audit analysis process to analyze the performance of said communication device in a communication network, wherein said automated intelligent expert network communication device audit analysis process analyzes parsed information by comparing parsed communication device information to values included in an expert network audit database, identifying exceptions to said values included in said expert network audit database, and providing advice on a corrective course of action to bring exceptions to said values included in said expert network audit database back within acceptable parameters.

31   A computer readable medium having stored thereon computer readable instructions, which when executed by a computer system of an automated network communication device audit tool cause the computer

system to implement a method for auditing a communications network device, the method comprising the steps of:

gathering communication device information;

parsing said gathered communication device information;

determining if additional communication device information is required;

analyzing the characteristic and operations of said network communications device; and

reporting said communication device information in a convenient format including identification of problems.

32   The computer readable medium having stored thereon computer readable instructions of Claim 30, which when executed by a computer system of an automated network communication device audit tool cause the computer system to implement a method for auditing a communications network device, the method further comprising the steps of:

determining the characteristics of said communication device;

comparing the results to a set of established net rules; and

identifying net rule exceptions.

33   The computer readable medium having stored thereon computer readable instructions of Claim 32, which when executed by a computer system of an automated network communication device audit tool cause the

computer system to implement a method for auditing a communications network device, wherein said established net rules comprise definitions of predefined thresholds for acceptable tolerances associated with different characteristics of said communication device including different acceptable tolerances for components of an optical concentrator.

34   The computer readable medium having stored thereon computer readable instructions of Claim 32, which when executed by a computer system of an automated network communication device audit tool cause the computer system to implement a method for auditing a communications network device, the method further comprising the step of assigning net rule exception points (NREPS) to identified net rule exceptions.

35   The computer readable medium having stored thereon computer readable instructions of Claim 34, which when executed by a computer system of an automated network communication device audit tool cause the computer system to implement a method for auditing a communications network device, wherein said net rule exception points are used to identify problems and potential problems, and said problems and potential problems are indicated within a network communication device audit table in a different manner than acceptable audit results.

36   The computer readable medium having stored thereon computer readable instructions of Claim 35, which when executed by a computer system of an automated network communication device audit tool cause the computer system to implement a method for auditing a communications network device, wherein warning threshold exceptions are presented in a special font and in a contrasting color and critical threshold exceptions are displayed in a distinguishing font and different color.

37   The computer readable medium having stored thereon computer readable instructions of Claim 31, which when executed by a computer system of an automated network communication device audit tool cause the computer system to implement a method for auditing a communications network device, said method further comprising the steps of:

   identifying potential causes of a problem; and

   providing a suggested corrective course of action for a problem.